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* * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 10:11:56 ON 27 FEB 2004

=> fil .bec
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                               ENTRY        SESSION
FULL ESTIMATED COST                            0.21          0.21


FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 10:12:07 ON 27 FEB 2004
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.


11 FILES IN THE FILE LIST

=> s sulfolobus or acidocaldarius
FILE 'MEDLINE'
          1110 SULFOLOBUS
           429 ACIDOCALDARIUS
L1        1213 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'SCISEARCH'
          1881 SULFOLOBUS
           903 ACIDOCALDARIUS
L2        2071 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'LIFESCI'
           906 SULFOLOBUS
           391 ACIDOCALDARIUS
L3         988 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'BIOTECHDS'
           374 SULFOLOBUS
           177 ACIDOCALDARIUS
L4         432 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'BIOSIS'
          1562 SULFOLOBUS
           745 ACIDOCALDARIUS
L5        1757 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'EMBASE'
          1011 SULFOLOBUS
           406 ACIDOCALDARIUS
L6        1112 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'HCAPLUS'
          1819 SULFOLOBUS
           814 ACIDOCALDARIUS
L7        2031 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'NTIS'
            37 SULFOLOBUS
            14 ACIDOCALDARIUS
L8          40 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'ESBIOBASE'
           687 SULFOLOBUS
           238 ACIDOCALDARIUS
L9         748 SULFOLOBUS OR ACIDOCALDARIUS


FILE 'BIOTECHNO'
           880 SULFOLOBUS
           323 ACIDOCALDARIUS
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L10          948 SULFOLOBUS OR ACIDOCALDARIUS

FILE 'WPIDS'
              78 SULFOLOBUS
              45 ACIDOCALDARIUS
L11           99 SULFOLOBUS OR ACIDOCALDARIUS

TOTAL FOR ALL FILES
L12        11439 SULFOLOBUS OR ACIDOCALDARIUS

=> s trehalose
FILE 'MEDLINE'
L13         2626 TREHALOSE

FILE 'SCISEARCH'
L14         3509 TREHALOSE

FILE 'LIFESCI'
L15         1692 TREHALOSE

FILE 'BIOTECHDS'
L16          644 TREHALOSE

FILE 'BIOSIS'
L17         4764 TREHALOSE

FILE 'EMBASE'
L18         2476 TREHALOSE

FILE 'HCAPLUS'
L19         8478 TREHALOSE

FILE 'NTIS'
L20           62 TREHALOSE

FILE 'ESBIOBASE'
L21         1324 TREHALOSE

FILE 'BIOTECHNO'
L22         1421 TREHALOSE

FILE 'WPIDS'
L23         1554 TREHALOSE

TOTAL FOR ALL FILES
L24        28550 TREHALOSE

=> s non-reducing saccharide
FILE 'MEDLINE'
       3152277 NON
        103777 REDUCING
          1901 SACCHARIDE
L25            1 NON-REDUCING SACCHARIDE
                  (NON(W)REDUCING(W)SACCHARIDE)

FILE 'SCISEARCH'
        722413 NON
        119729 REDUCING
          2402 SACCHARIDE
L26            1 NON-REDUCING SACCHARIDE
                  (NON(W)REDUCING(W)SACCHARIDE)

FILE 'LIFESCI'
        150792 "NON"
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              25192 "REDUCING"
                593 "SACCHARIDE"
L27              3 NON-REDUCING SACCHARIDE
                    ("NON"(W)"REDUCING"(W)"SACCHARIDE")


FILE 'BIOTECHDS'
              34574 NON
               8828 REDUCING
                622 SACCHARIDE
L28             17 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


FILE 'BIOSIS'
             625094 NON
             104626 REDUCING
              18339 SACCHARIDE
L29             16 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


FILE 'EMBASE'
             552292 "NON"
              92552 "REDUCING"
               1657 "SACCHARIDE"
L30              0 NON-REDUCING SACCHARIDE
                    ("NON"(W)"REDUCING"(W)"SACCHARIDE")


FILE 'HCAPLUS'
             639198 NON
             295946 REDUCING
               8145 SACCHARIDE
L31             16 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


FILE 'NTIS'
              90238 NON
              26445 REDUCING
                100 SACCHARIDE
L32              0 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


FILE 'ESBIOBASE'
             211044 NON
              35021 REDUCING
                725 SACCHARIDE
L33              0 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


FILE 'BIOTECHNO'
             130373 NON
              21512 REDUCING
                664 SACCHARIDE
L34              0 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


FILE 'WPIDS'
            1121501 NON
             355630 REDUCING
               7570 SACCHARIDE
L35             29 NON-REDUCING SACCHARIDE
                    (NON(W)REDUCING(W)SACCHARIDE)


TOTAL FOR ALL FILES
L36             83 NON-REDUCING SACCHARIDE
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=> s (124 or 136)(8a)(synthes? or produc? or form######)(5a)enzym?
FILE 'MEDLINE'
        445238 SYNTHES?
       1135243 PRODUC?
       1188660 FORM######
       1030319 ENZYM?
L37          51 (L13 OR L25)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'SCISEARCH'
        776887 SYNTHES?
       1545827 PRODUC?
       1788036 FORM######
        480163 ENZYM?
L38          71 (L14 OR L26)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'LIFESCI'
        130707 SYNTHES?
        463924 PRODUC?
        357034 FORM######
        209674 ENZYM?
L39          47 (L15 OR L27)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'BIOTECHDS'
         28061 SYNTHES?
        191941 PRODUC?
         79494 FORM######
        115152 ENZYM?
L40          58 (L16 OR L28)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'BIOSIS'
        603976 SYNTHES?
       1545814 PRODUC?
       1385833 FORM######
       1699152 ENZYM?
L41          79 (L17 OR L29)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'EMBASE'
        546866 SYNTHES?
       1097944 PRODUC?
       1037677 FORM######
        759333 ENZYM?
L42          42 (L18 OR L30)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'HCAPLUS'
       1349708 SYNTHES?
       3804585 PRODUC?
        796961 PRODN
       4195323 PRODUC?
                  (PRODUC? OR PRODN)
       5335120 FORM######
        994637 ENZYM?
L43         163 (L19 OR L31)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'NTIS'
         41451 SYNTHES?
        359115 PRODUC?
        282623 FORM######
         12614 ENZYM?
L44           4 (L20 OR L32)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?

FILE 'ESBIOBASE'
        160785 SYNTHES?
        463794 PRODUC?
        382205 FORM######
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           224305 ENZYM?
L45          36 (L21 OR L33)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?


FILE 'BIOTECHNO'
           170699 SYNTHES?
           394590 PRODUC?
           318693 FORM######
           366038 ENZYM?
L46          41 (L22 OR L34)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?


FILE 'WPIDS'
           113412 SYNTHES?
          2058020 PRODUC?
          4202984 FORM######
            77717 ENZYM?
L47          48 (L23 OR L35)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A)ENZYM?


TOTAL FOR ALL FILES
L48         640 (L24 OR L36)(8A)(SYNTHES? OR PRODUC? OR FORM######)(5A) ENZYM?

=> s l48 and thermostab?
FILE 'MEDLINE'
           5920 THERMOSTAB?
L49           2 L37 AND THERMOSTAB?


FILE 'SCISEARCH'
           8074 THERMOSTAB?
L50           9 L38 AND THERMOSTAB?


FILE 'LIFESCI'
           3645 THERMOSTAB?
L51           5 L39 AND THERMOSTAB?


FILE 'BIOTECHDS'
           6374 THERMOSTAB?
L52          13 L40 AND THERMOSTAB?


FILE 'BIOSIS'
           9714 THERMOSTAB?
L53          11 L41 AND THERMOSTAB?


FILE 'EMBASE'
          10598 THERMOSTAB?
L54           6 L42 AND THERMOSTAB?


FILE 'HCAPLUS'
          18082 THERMOSTAB?
L55          13 L43 AND THERMOSTAB?


FILE 'NTIS'
            185 THERMOSTAB?
L56           0 L44 AND THERMOSTAB?


FILE 'ESBIOBASE'
           3039 THERMOSTAB?
L57           3 L45 AND THERMOSTAB?


FILE 'BIOTECHNO'
           6565 THERMOSTAB?
L58           6 L46 AND THERMOSTAB?


FILE 'WPIDS'
           4752 THERMOSTAB?
L59           3 L47 AND THERMOSTAB?
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TOTAL FOR ALL FILES
L60          71 L48 AND THERMOSTAB?

=> s 112 and (124 or 136)
FILE 'MEDLINE'
L61          20 L1 AND (L13 OR L25)


FILE 'SCISEARCH'
L62          39 L2 AND (L14 OR L26)


FILE 'LIFESCI'
L63          14 L3 AND (L15 OR L27)


FILE 'BIOTECHDS'
L64          21 L4 AND (L16 OR L28)


FILE 'BIOSIS'
L65          29 L5 AND (L17 OR L29)


FILE 'EMBASE'
L66          10 L6 AND (L18 OR L30)


FILE 'HCAPLUS'
L67          45 L7 AND (L19 OR L31)


FILE 'NTIS'
L68           0 L8 AND (L20 OR L32)


FILE 'ESBIOBASE'
L69          16 L9 AND (L21 OR L33)


FILE 'BIOTECHNO'
L70          17 L10 AND (L22 OR L34)


FILE 'WPIDS'
L71           7 L11 AND (L23 OR L35)


TOTAL FOR ALL FILES
L72         218 L12 AND (L24 OR L36)

=> s (160 or 172) not 1996-2004/py
FILE 'MEDLINE'
       3905779 1996-2004/PY
L73           0 (L49 OR L61) NOT 1996-2004/PY


FILE 'SCISEARCH'
       7846758 1996-2004/PY
L74           0 (L50 OR L62) NOT 1996-2004/PY


FILE 'LIFESCI'
        867116 1996-2004/PY
L75           1 (L51 OR L63) NOT 1996-2004/PY


FILE 'BIOTECHDS'
        136164 1996-2004/PY
L76           6 (L52 OR L64) NOT 1996-2004/PY


FILE 'BIOSIS'
       4465844 1996-2004/PY
L77           1 (L53 OR L65) NOT 1996-2004/PY


FILE 'EMBASE'
       3501804 1996-2004/PY
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L78              0 (L54 OR L66) NOT 1996-2004/PY

FILE 'HCAPLUS'
         7150403 1996-2004/PY
L79              3 (L55 OR L67) NOT 1996-2004/PY

FILE 'NTIS'
         188994 1996-2004/PY
L80              0 (L56 OR L68) NOT 1996-2004/PY

FILE 'ESBIOBASE'
         2194792 1996-2004/PY
L81              0 (L57 OR L69) NOT 1996-2004/PY

FILE 'BIOTECHNO'
         931657 1996-2004/PY
L82              0 (L58 OR L70) NOT 1996-2004/PY

FILE 'WPIDS'
         5912427 1996-2004/PY
L83              0 (L59 OR L71) NOT 1996-2004/PY

TOTAL FOR ALL FILES
L84             11 (L60 OR L72) NOT 1996-2004/PY

=> dup rem l84
PROCESSING COMPLETED FOR L84
L85              7 DUP REM L84 (4 DUPLICATES REMOVED)

=> d tot


L85    ANSWER 1 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
TI     Novel transferase and amylase production and use;
           enzyme preparation for oligosaccharide and alpha,alpha-
           trehalose production
AU     Kato M; Miura Y; Kettoku M; Kobayashi K; Iwamatsu A; Komeda T
AN     1996-02920  BIOTECHDS
PI     WO 9534642 21 Dec 1995


L85    ANSWER 2 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
TI     Thermostable non-reducing
       saccharide-forming enzyme;
           non-reducing partial starch hydrolyzate or trehalose
           production using new Sulfolobus sp. enzyme
           and glucoamylase or alpha-glucosidase for use as a sweetener, etc.
AU     Nakada T; Chaen H; Sugimoto T; Miyake T
AN     1996-03026  BIOTECHDS
PI     EP 688867 27 Dec 1995


L85    ANSWER 3 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
TI     Thermostable trehalose-releasing enzyme;
           Sulfobolus acidocaldarius and Sulfobolus solfataricus
           thermostable enzyme production and characterization,
AU     Ikegami S; Kubota M; Sugimoto T; Miyake T
AN     1996-04132  BIOTECHDS
PI     EP 688866 27 Dec 1995


L85    ANSWER 4 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
TI     Non-reducing saccharide-forming
       enzyme and its production and application;
           Arthrobacter sp. and Rhizobium sp. fermentation and enzyme
           use in alpha-glucosyl trehalose production
AN     1994-11285  BIOTECHDS
PI     EP 606753 20 Jul 1994
```

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L85    ANSWER 5 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
TI     **Thermostable** amylolytic activity from **Sulfolobus**
       solfataricus;
           amylase production, purification and characterization; starch
           saccharification to glucose and **trehalose**
SO     Biotech Forum Eur.; (1991) 8, 4, 201-03
AU     Lama L; Nicolaus B; Trincone A; Morzillo P; Calandrelli V; Gambacorta A
AN     1991-08311  BIOTECHDS


L85    ANSWER 6 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
TI     Starch conversion with immobilized thermophilic archaebacterium
       **Sulfolobus** solfataricus;
           glucose production from starch saccharification by thermostable
           glucoamylase
SO     Biotechnol.Lett.; (1990) 12, 6, 431-32
       CODEN: BILED3
AU     Lama L; Nicolaus B; Trincone A; Morzillo P; De Rosa M; Gambacorta A
AN     1990-10306  BIOTECHDS


L85    ANSWER 7 OF 7  LIFESCI    COPYRIGHT 2004 CSA on STN DUPLICATE 3
TI     **Trehalose** in archaebacteria.
SO     SYST. APPL. MICROBIOL., (1988) vol. 10, no. 3, pp. 215-217.
AU     Nicolaus, B.; Gambacorta, A.; Basso, A.L.; Riccio, R.; De Rosa, M.; Grant,
       W.D.
AN     88:92917  LIFESCI


=> d ab 4,7

L85    ANSWER 4 OF 7  BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
AB     A new **non-reducing saccharide-**
       **forming enzyme** (I) is prepared by culturing a bacterium
       of the genera Rhizobium, Arthrobacter, Brevibacterium, Flavobacterium,
       Micrococcus, Curtobacterium, Mycobacterium or Terrebacter or their
       mutants, especially Rhizobium sp. M-11 (FERM BP-4130) and Arthrobacter
       sp. Q36 (FERM BP-4316). (I) is capable of catalyzing the formation of
       trehalose-type sugars with a trehalose structure as an end unit from
       partial starch hydrolyzates of degree of glucose polymerization at least
       3. Glucoamylase (EC-3.2.1.3) and alpha-glucosidase (EC-3.2.1.20) may
       then be used to convert the product to trehalose. The trehalose-type
       sugars are useful in food, cosmetics and pharmaceuticals. (I) has
       mol.weight 76,000-87,000 (SDS-PAGE), isoelectric point 3.6 +/- 4.6 using an
       ampholyte, optimal activity at 35-40 deg and pH 6.4-7.2,
       **thermostability** up to 35-40 deg at pH 7.0 for 1 hr; and pH
       stability of 5.5-11.0 at 25 deg for 16 hr. (I) forms alpha-glucosyl
       trehalose of formula Gn-T (where G = glucose residue, n = integer and T =
       alpha,alpha-trehalose). Alpha-glucosyl trehalose and its compositions
       are also new. (42pp)

L85    ANSWER 7 OF 7  LIFESCI    COPYRIGHT 2004 CSA on STN DUPLICATE 3
AB     The non-reducing disaccharide **trehalose** ( alpha
       -D-glucopyranosyl- alpha -D-glucopyranoside) was identified in
       **Sulfolobus** solfataricus  by  super(13)C NMR spectroscopy. The
       screening of a range of other archaebacteria, using a rapid isolation and
       purification procedure for **trehalose**, indicated that this
       disaccharide is present in a number of halophilic archaebacteria,
       thermophilic and sulphur-dependent archaebacteria and methanogenic
       archaebacteria.


=> fil .becpat
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                              ENTRY     SESSION
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FILES 'BIOTECHDS, HCAPLUS, WPIDS' ENTERED AT 10:27:04 ON 27 FEB 2004
ALL COPYRIGHTS AND RESTRICTIONS APPLY. SEE HELP USAGETERMS FOR DETAILS.

3 FILES IN THE FILE LIST

```
=> s (160 or 172) and wo/pc and pry<=1995 and py>=2000
FILE 'BIOTECHDS'
         50706 WO/PC
         69726 PRY<=1995
               (PRY<=1995)
         80362 PY>=2000
               (PY>=2000)
L86          0 (L52 OR L64) AND WO/PC AND PRY<=1995 AND PY>=2000


FILE 'HCAPLUS'
        351735 WO/PC
       2212883 PRY<=1995
       4035312 PY>=2000
L87          1 (L55 OR L67) AND WO/PC AND PRY<=1995 AND PY>=2000


FILE 'WPIDS'
        836744 WO/PC
       8426999 PRY<=1995
               (PRY<=1995)
       3663701 PY>=2000
               (PY>=2000)
L88          1 (L59 OR L71) AND WO/PC AND PRY<=1995 AND PY>=2000


TOTAL FOR ALL FILES
L89          2 (L60 OR L72) AND WO/PC AND PRY<=1995 AND PY>=2000

=> dup rem l89
PROCESSING COMPLETED FOR L89
L90              1 DUP REM L89 (1 DUPLICATE REMOVED)

=> d
```

L90   ANSWER 1 OF 1 HCAPLUS   COPYRIGHT 2004 ACS on STN DUPLICATE 1
TI   Cloning and expression of genes for novel transferase and amylase of
      Sulfolobus and uses of the enzymes for preparing oligosaccharides
SO   PCT Int. Appl., 357 pp.
      CODEN: PIXXD2
IN   Kato, Masaru; Miura, Yutaka; Kettoku, Masako; Iwamatsu, Akihiro;
      Kobayashi, Kazuo; Komeda, Toshihiro
AN   1996:121151 HCAPLUS
DN   124:169384

```
      PATENT NO.         KIND  DATE          APPLICATION NO.   DATE
      ---------------    ----  --------      ---------------   --------
PI    WO 9534642          A1   19951221      WO 1995-JP1189    19950614 <--
         W:  AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
             GB, GE, HU, IS, JP, KE, KG, KR, KZ, LK, LR, LT, LU, LV, MD, MG,
             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM,
             TT, UA
         RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
             LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
             SN, TD, TG
      AU 9526824          A1   19960105      AU 1995-26824     19950614 <--
      EP 764720           A1   19970326      EP 1995-921965    19950614 <--
         R:  CH, DE, DK, FR, GB, IT, LI
      EP 1130101          A2   20010905      EP 2000-125389    19950614 <--
         R:  CH, DE, DK, FR, GB, IT, LI
      US 6391595          B1   20020521      US 1999-298924    19990426 <--
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=> log y
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	35.07	105.83

STN INTERNATIONAL LOGOFF AT 10:31:57 ON 27 FEB 2004